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BULLETIN
OF
The American Gastroscopic Society

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VOL. IV MARCH, 1957 NO. 24

The President's Column

Dear Fellow Gastroscopists—and, I hope, Conventioneers,

I address you with the second salutation because I want you to be so very meeting-minded now and in May that there'll be no other course for you than to attend our Society's annual convocation in Colorado Springs. It's to be on the sixteenth of May. Dr. Wirts has already written you concerning it and he's outlined the program, for the excellence of which he's chiefly responsible. Let me elaborate on his exposition of our plans!

I, personally, favoured the holding of our annual conclave in New York City just prior to the sessions of The A. M. A. there in June. But a vote taken at the business meeting of the entire Society at Chicago showed that a majority of the members present preferred to gather at Colorado Springs on the day before the sessions of The American Gastroenterological Association there. So again we are going West! And there will be plenty of meetings to attend!

While I'm in no way an advertising agent of the University of Colorado, that institution is sponsoring a Postgraduate Course in Gastroenterology which will be given by members of The American Gastroenterological in Denver on May thirteenth, fourteenth, and fifteenth. I presume that the University will charge a fee for the course. Any of you who may be interested in attending its sessions may write Dr. C. Wesley Eisele, Director of Postgraduate Medical Education, Medical Center of The University of Colorado, 4200 East Ninth Avenue, Denver 20, Colorado. We will invite the P-G students to our sessions in Colorado Springs. And a similar invitation will be extended to them by The Research Group, which will convene there too, as will The A. G. A. We gastroscopists will have our scientific meeting at The Broadmoor Hotel at The Springs on the morning of the sixteenth of May; The Researchers will have theirs on the afternoon of that day.

In order to include in our single scientific session as many as possible of the best papers that have been submitted for our programme, I shall forgo my prerogative of boring you with a presidential address so that Dr. Hirschowitz may, at half-past-eight o'clock, tell you about what I understand to be a new principle of gastroscopy. I hear that fiberglass conducts light around corners and that Dr. H has used this material in a new type of gastroscope. I'm sorry that we have had to put him on our programme so very early, but we'll have an opportunity to see what his device is and to ask questions about it.

At nine Dr. Dagradi and Dr. Schindler will tell us how useful they find endoscopy to be in studying hiatal herniae. They have a few "pointers" in technique to give us too.

At half-after-nine Dr. Flood and Dr. Hennig will discuss the management of hiatal herniae.

Then at ten comes Dr. Robert S. Nelson with new ideas and methods for taking photographs through the gastroscope.

Mr. Hermon Taylor of London (the inventor of the gastroscope which carries his name) will be the Society's guest and he will talk at half-after-ten on "Difficulties and Dangers of Gastroscopy."

At eleven there will be a panel discussion on the clinical aspects of oesophageal conditions. Dr. Kirsner will be the moderator and the panelists will be Dr. Samuel H. Kushlan, Dr. Frank B. McGlone, Dr. Frederick Templeton, Dr. Moses Paulson, and Dr. Edward B. Benedict. The latitude of the subject will certainly invite questions. Be certain to bring yours. I shall ask the panel's opinion about their successes and failures with oesophagoscopy and gastroscopy when patients are actively bleeding from the upper gastro-intestinal tract.

Most appropriately The Research Group has taken the subject of Oesophageal Motility for its afternoon meeting. First they will talk about the instruments for measuring oesophageal motility and subsequently there will be a discussion of the sphincter mechanism of the lower oesophagus. Perhaps you have already received The Researchers' detailed programme. We are welcome to attend their meeting.

May 13 57

Following a cocktail party with The Researchers, we'll have a joint banquet with them at The Broadmoor Hotel on the evening of May sixteenth. There the Rudolf Schindler Award will be presented to Mr. Hermon Taylor by our Society. Mr. Taylor always speaks well and I promise that he will talk informally and briefly on a subject which won't bore the ladies who may be dining with us. Our principal after-dinner speaker has not yet been selected. But we are presently searching for the best person to tell us something of the history of the country around Colorado Springs, especially that of the gold and silver mining era. You have received, or you will receive, postal cards on which you may notify Dr. Wirts of your wish to have reservations for our social affair. As formerly, ladies will be most welcome.

On the seventeenth and eighteenth of May The American Gastroenterological Association will meet at The Broadmoor and you will probably want to attend its sessions, which are always open to us.

I have never seen The Broadmoor Hotel but I understand that it is a large one. Still it might not be large enough to accommodate all of us gastroscopists and The Researchers on the night of May fifteenth. Because a sizeable convention, which precedes us at the Hotel, will conclude its meetings on that date, The Broadmoor's manager tells us that the rooms may not be vacated at once. Therefore, some of us may have to find quarters elsewhere in Colorado Springs for the night of the fifteenth in order to get to *our* meeting early the following morning. Should you have trouble in securing space at The Broadmoor, I hear that The Antlers Hotel has satisfactory rooms and good beds. But perhaps the Reservation Office of The Broadmoor will place you and your party.

In anticipation of an excellent meeting, scientifically and socially, I am

Faithfully yours,
JOHN TILDEN HOWARD.

P. S.—On reading this letter about our programme, I feel that I've omitted two of the most important features of the meeting at Colorado Springs. One is the unofficial bull sessions which we'll surely have in the lobbies or bars or restaurants. These sessions are always started when two or three gastroscopists are gathered together and they generally begin with, "I had a case——."

The other feature is the renewal of old friendships and the making of new ones. We may differ in our attitudes toward gastritis, in our use of endoscopic instruments, and in our politics; but we remain friends!

J. T. H.

Gastrointestinal Polyposis

Two Case Reports With Gastroscopic Findings

* ROBERT J. PRIEST, M.D.

In recent years the syndrome of generalized intestinal polyposis associated with melanin spots in the oral mucosa, lips and digits has been described by Jeghers, et al[1]. Although the syndrome had been described in earlier reports [2,3], Peutz[4] in 1921 outlined the familial incidence. The eponym of "Peutz-Jeghers syndrome" has been applied to these associated clinical findings.

Another syndrome has been described by Cronkhite and Canada[5] consisting of polyposis, pigmentation, and Canada (5) consisting of polyposis, pigmentation, alopecia, and onchotrophia. The two cases reported of the latter syndrome included roentgen demonstration of gastric polyps with surgical confirmation of one case. In the first series of ten cases reported by Jeghers, three had gastric polyposis found at necropsy, as well as the predominant intestinal polyposis. One patient of the series was found to have a normal stomach by palpation during an operation for intestinal resection.

Following Jeghers' original description, similar intestinal polyposis has been described in over fifteen reports. Bortz and Bethell[6] in 1954 first described the gastroscopic appearance of numerous polyps associated with intestinal polyposis and pigmented spots in the oral mucosa. The polyps described varied in size from one-eighth inch to one and one-half inches in diameter. Usually their patient anemia was the chief and presenting difficulty. The following case report presents a patient with the Peutz-Jeghers syndrome who has been observed for thirty years in our clinic.

CASE REPORT

This 40-year-old female had been brought to the clinic in 1927 when she was eleven years of age. Her mother had noted "black marks" on her lips when she was one week old. These pigmented spots had increased in number during the child's life. (Fig. 1) An operation in June, 1927 revealed multiple polyps of the small intestine with intussception and intestinal obstruction. Three feet of the upper ileum was resected at that time. Six papillomata ranging in size from 0.5 to 2 cm. were found.

Figure 1

In November, 1941 proctoscopy demonstrated multiple polyposis of her rectum. A barium enema diagnosed polyps in the descending colon, although roentgen examination of the stomach and small intestine was normal. A biopsy of the rectal polyp was reported as a benign papilloma. In January, 1942 an ileorectostomy was done followed by a colectomy in March, 1942. Five months later additional rectal polyps were removed through the sigmoidoscope. In August, 1944 at the time of an operation on a cyst of the right ovary, a polyp of the ileum was excised. In November, 1946 the patient had a cholecystectomy at which time a resection of the jejunum was done with the discovery of an adenocarcinoma in a jejunal polyp. At that time the blood hemoglobin was 6.3 grams. Again in August, 1948 a benign rectal polyp was excised. In September, 1952 a rectal polyp was removed which revealed Grade I adenocarcinoma. In April, 1954 another benign rectal polyp was removed. At that time roentgen examination of the small intes-

* From the Division of Gastroenterology, Henry Ford Hospital, Detroit.

demonstrated the "coiled ring" pattern of intussception (Fig. 2). Polypoid changes in the gastric mucosa were observed with a nodular pattern in the fundus of the stomach.

Figure 2

The patient was gastroscoped in July, 1954. The stomach was viewed in all accessible areas. The angularis was identified and the proximal antrum was seen. The lower and middle thirds of the stomach were apparently normal. In the upper third of the stomach in the area presenting polypoid changes in the roentgen examination, a sessile polyp was observed between two rugal folds. The polyp appeared to be approximately 8 mm. in diameter.

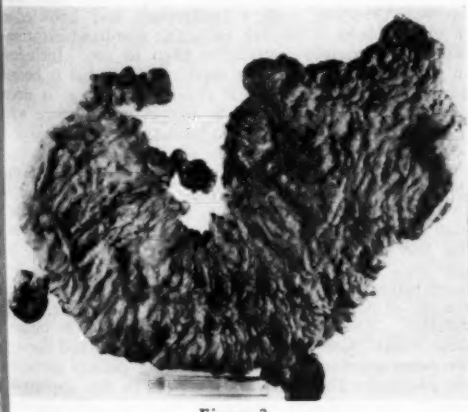

Figure 3

In May, 1954 the patient had a multiple polypectomy and resection of the upper jejunum (Fig. 3). Histologic examination of these polyps was benign. In February, 1955 a papillary cystadenocarcinoma of the left ovary and a serous cystadenocarcinoma of the right ovary were removed. The patient has maintained a microcytic, hypochromic anemia for several years. Polyps had been removed again from the rectum in July, 1955, diagnosed a Grade I adenocarcinoma. In September, 1956 a benign rectal polyp was removed from the inferior rectal valve.

In summary, the patient has been observed closely for thirty years. The pigment spots on her lips had been recognized by her mother when she was one week old. She is an example of the Peutz-Jeghers syndrome. She was gastroscoped because of her history of surgical removal of polyps from the rectum, colon, ileum and jejunum. A sessile polyp was seen in the upper third of the stomach.

COMMENT

Cronkhite and Canada (5) have pointed out that the familial incidence of intestinal polyposis accounts "for only a small proportion of the total number reported." Of the remainder without any apparent hereditary factor, there is in common the finding of one or more adenomatous polyps somewhere in the gastrointestinal tract. These latter patients may have single, multiple or generalized polyposis.

The following case report concerns a patient who had multiple polyps removed from the rectum, gallbladder and stomach.

CASE REPORT

This 55-year-old female had a benign rectal polyp removed in 1947. A cholecystogram in 1954 demonstrated one radiolucent area visualized on all films. The radiolucency seemed to change with position and was considered a gallstone. Cholecystectomy was done in August, 1954. A small polyp was found in the body of the gallbladder and no calculi were present. Microscopically it was a well-differentiated papilloma of the gallbladder, lined by a tall columnar epithelium on the surface of the papilloma.

After the cholecystectomy, the patient complained of persistent epigastric burning distress. Gastric analysis demonstrated a histamine-refractory achlorhydria. Roentgen examination of the stomach on two occasions did not demonstrate any abnormalities. Gastroscopy in March, 1955 revealed a widespread atrophic gastritis and a one-centimeter polyp on the lesser curvature of the middle third of the stomach. Progress gastroscopy five months later again revealed the polyp on the anterior wall of the middle third of the stomach with the atrophic gastritis and areas of superficial gastritis. The patient had been under therapy with 50 mgm. of nicotinamide daily. A third gastroscopic observation was done in November, 1955. Several sessile polyps were seen in the area of the previous single polyp. One of these polyps was bleeding. Therefore the patient was advised to have surgical removal of the polyps because of their increase in number and their association with the achlorhydria and atrophic gastritis. The polyps located on the anterior wall of the stomach were excised by an elliptical incision of the gastric wall. The distal and proximal stomach was examined through a sterile proctoscope and no additional polyps were found. The histologic examination of these gastric polyps revealed benign structures composed of tall columnar cells, the stroma containing a few collections of chronic inflammatory cells, and loose connecting tissue which was rather vascular. In March, 1956 a proctoscopy revealed another polyp of the rectum which was removed and proved to be benign.

In summary, this patient has had polyps removed from the rectum, the stomach and the gallbladder. The diagnosis of gastric polyposis established by gastroscopy had not been diagnosed successfully by roentgen examination of the stomach.

Comment

Carey and Hay[7] have concluded that the increase in the number of polyps in a particular stomach does not imply a malignant tendency. However, the association of polyps in our patient's stomach with an atrophic mucosa which secreted no free hydrochloric acid led to the recommendation for their surgical removal. It was fortunate that excision of the benign polyps was possible without a gastric resection.

SUMMARY

Two case reports have been presented illustrating two types of gastric polyposis diagnosed by gastroscopic observation. The first patient presented a familial disease with pigment spots on her lips and generalized intestinal polyposis. The second patient presented non-familial polyposis of rectum, gallbladder and stomach.

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The Present Day Status of Flexible Tube Esophagoscopy

EDWIN BOROS, M.D.

Presented at the Annual Meeting of the American Gastroscopic Society, June 10, 1956, Chicago, Ill.

This discourse proposes a clarification and appraisal of flexible tube esophagoscopy since its introduction in 1947 by the author. Much progress has taken place since then. Other instruments have been developed which embrace in part the basic facts and principles pointed out by the speaker in his original presentation. However, there is much yet to be accomplished in this field.

Instrumental exploration of the gullet by means of the flexible esophagoscope has afforded an opportunity to conduct studies and make observations of this organ in patients complaining of heartburn. The symptom of heartburn, whose cause is not clear, merits visual inspection of the esophagus. Only in this way is possible to identify strictures which occur in this regio

An impressive finding was encountered by me in patient with leukemia. This subject revealed on esophag scopic examination a hitherto unobserved and unknow phenomenon, at least to me. There was an elevat circular mound of purplish hue resembling a hematom in reality a leukemic tumor of the posterior wall of th esophagus, just below the crico-pharyngeal muscle.

There is no hesitation about passing a flexible tu in a patient suspected of esophageal varices, exce where there is active bleeding. One does not at a times see the distended wormlike elevations so cha acteristic of this disorder. Indeed, strange views a obtained from time to time. A marked mucosal eden and congestion sufficiently advanced to cause appositio of the walls, with nothing but intense engorgement a friability, may be observed. The enlarged veins a apparently buried in the swollen mucosa. While port cirrhosis is frequently associated with dilated esophage veins, one may see only a small but distinct vein in th mid-portion of the gullet in a patient with melena.

Esophagoscopic observations in patients with jaundi are of interest. Jaundice is well characterized by markedly intense discoloration of the esophageal mu cosa, somewhat more distinctive than that of the in tegument itself.

These are but a few examples illustrating the value o esophagoscopic observations. The method of examin tion is fairly well standardized and need not be describ here. Uncertainties, problems, some timidity, are a natural expectations in all new methods. Schindler' attainment of a practical flexible gastroscope was th culmination of prior effort to gain entrance to, and ex plore, the gastric cavity. There was no improvement, i instrumentation of the esophagus, despite the danger and shortcomings of rigid tubes. It is no wonder tha the gastro-enterologist's knowledge of this area kep pace with the limited interest and scope of the laryn gologist, in whose hands this instrumentation reposed. There lay the roadblock to progress.

The author has had a thorough training over man years in the use of rigid tubes. The flexible tube wa evolved, therefore, with a background and knowledg of the problems of the day, including first-hand informa tion of the various instruments then in use. Includin in these, there was a direct replica of one that is bein advertised widely to-day. It consisted then, as it doe now, basically of a rigid tube within which there wa contained a removable flexible obturator. It concerne itself merely with the problem of introduction, and le the operator then, as it does now, "on his own" durin the remainder of the examination. In effect then, afte passage through the oral cavity, one is actually workin with a rigid instrument. But by no means is it implie that this circumstance makes this a bad instrument. I may well serve the purpose of the user who may b quite happy with it, just as I was with rigid tubes. The concept of flexible tube esophagoscopy is however, quit different. There is no ambiguity about it. It mean what it says. Complete flexibility throughout and *durin the entire examination, not only during passage throug the pharynx.* The safety factor resides in this importan feature, and envisages extraneous encroachments on th lumen as well as encumbrances within. Lastly and mos important, the anatomy of the lower esophagus is no disdained. A problem all its own is confronted here because there takes place unmistakable veering of thi organ anteriorly and to the left, and if one is to nego tiate this turn safely and not pay the price of past mis

fortunes, extreme caution and a light touch, if ever required, finds its need here. The value of a soft tip in this region requires no emphasis.

Inasmuch as so many gastroscopists have now become esophagoscopists as well, it might be pertinent to advance a few thoughts on the difference in the basic mechanics of both these procedures. The former presupposes the existence of an open lumen and clear field before attempted instrumentation is effected. Exploring the esophagus in the face of obstruction from within or extraneously is an *invitation,* rather than contraindication, for esophagoscopic procedure. Gastroscopy performed blindly is proper practice, provided the usual safeguards are enforced. Actual and intimate visual observation is at all times an indispensable condition in the performance of an esophagoscopy as soon as the organ is entered and clear vision is afforded.

All that has been said will have lost force if certain fundamental features are not carried out prior to instrumentation. Adherence to detailed preliminary preparations cannot be dispensed. A little effort here can avoid peevishness to both patient and performer. A frisky patient is a bad one for passing instruments. Demerol intravenously, in doses of 50 to 100 mgm. has been oft resorted to in order to obtain complacence in a patient who had already been medicated with the routine subcutaneous injection of sodium luminal (gr. 3) followed by morphine (gr. ¼) and atropine sulphate (gr. 1/100). The so-called "sermon" to the patient is a ritual in our technique. With the patient fully aware as to the nature of the procedure, his acquiescence and cooperation are assured for the completion of a simple and safe technique. The performance can no more be done satisfactorily otherwise, than would be possible to hypnotize a subject against his will. It has seldom been necessary to use a general anaesthetic during the introduction of a flexible esophagoscope. Such is not the case when employing rigid tubes. Efforts obviously are directed towards simplification of the procedure to its limit. The addition of a general anaesthetic does not do this. Adding difficulties to the performance will not invite future referrals, defeats the basic theories, and is in conflict with proved experiences which have become a reality.

It was not so long ago that the average physician or surgeon would shrink when confronted by the thought of esophagoscopic instrumentation, and in no small measure has such an attitude in the past been justified. Nor has the patient himself shared a different feeling in the past. If we are to make progress we must be attuned, and we must be ready to accept the newer developments which some of us at times are a little hesitant to accept. If we are to investigate and evaluate, and add further to our resources, we have the means by which we can do so. It has been asked how intense is the actual need for instrumental esophageal exploration? Can it be performed routinely? The answer depends on what one has in mind. If one desires to investigate, complete freedom and safety is assured with ease to the patient. Where one wishes to treat, facility of manipulation is afforded. For more concerted and expansive surgical endeavor, the operator is spared the ordeal and danger of past experiences.

Abstracts

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AUTHOR: Schindler, R.

TITLE: Observations on Cardiospasm and Its Treatment by Brusque Dilatation.

REFERENCE: Ann. Int. Med. 45:207, August 1956

ABSTRACT: Schindler reports on 85 patients with cardiospasm treated by brusque dilatation with the Starck metal dilator. All of these patients had preliminary study by roentgen ray, esophagoscopy and gastroscopy. He feels that endoscopic examination is an essential adjunct to roentgen study because of the possibility of associated gastritis, ulcer of the stomach or esophagus or neoplasm. In some patients fibrotic stricture may be present. In the majority of patients he advises the repeated passage of a 45 French bougie on several occasions prior to the actual dilatation so that they may become accustomed to the procedure.

For the dilatation itself, the patient is hospitalized and receives penicillin and streptomycin and the stomach and esophagus are carefully lavaged. He does not use sedatives prior to the dilatation because they might relax the patient's muscles and prevent their forceful rupture. Local anesthesia of the throat is employed and then the patient is placed on the fluoroscopic table on his back with the head hanging down over the edge of a hard pillow and supported by an assistant. The instrument is then carefully introduced into the stomach until the position of its dilating portion is exactly at the point of narrowing verified fluoroscopically. The patient is warned that he will feel severe pain but that under no condition must he move. When the patient is as tense as possible, the instrument is opened forcibly often against a marked resistance. In fact the operator's hand often has the most disagreeable feeling of hard tissue being broken up. After the dilatation the patient fasts until the following morning and if the temperature has remained normal, a regular breakfast is given and he usually can swallow without difficulty.

Of the 84 cases treated, 80 are reported as cured and 4 as not cured. There were no fatalities, but in five cases complications occurred, including fever in three cases which was treated by antibiotics and a small lesion in the stomach of two cases which required surgical intervention. In only one of the patients was the perforation found.

The cure of cardiospasm by brusque dilatation is usually permanent although in some cases the esophagus remains wide. Schindler has had only one recurrence in this group.

ABSTRACTER—C. Wilmer Wirts, M.D.

AUTHOR: Dagradi, A. E., Olson, D. and Stempiem, S.

TITLE: The Gastric Mucosa in Liver Cirrhosis.

REFERENCE: Gastroenterology 31:74, July 1956.

ABSTRACT: In an effort to determine the incidence and type of gastritis associated with hepatic cirrhosis, Dagradi and his colleagues selected from their endoscopic case material a group of fifty cirrhotic patients who had undergone gastroscopic examination. Gastritis of varying types was noted to be present in 41 patients and in 9 the mucosa was normal.

The gastritis was noted to be mild in 13 patients and either moderately severe or extensive in 28. Submucosal hemorrhages and erosions of the gastric mucosa were encountered in a number of these cases. Of great interest is the fact that atrophic and superficial gastritis, alone or in combination, was present in 35 patients or 70 per cent of the total group.

In the alcoholic group 21 patients having moderately extensive or severe atrophic and oblique line or superficial gastritis had a long-standing history of large alcoholic consumption. Two had a history of heavy alcoholism lasting 5 years or less, and only 1 had a long-standing history of mild alcoholism. Five patients having a long history of large alcoholic intake demonstrated a gastroscopically normal mucosa, and 2 patients giving a shorter history of heavy alcoholic consumption demonstrated a normal appearing mucosa. Of the 6 non-alcoholic patients, 2 had an endoscopically normal gastric mucosa while 4 had an extensive gastritis. Of this latter group, 3 demonstrated an atrophic gastritis and 1 had hypertrophic gastritis. It is interesting to note that 2 of these 3 cases of extensive atrophic gastritis gave a history of long-standing inadequate diet.

Whether the chronic ingestion of alcohol by these patients was responsible for the production of the chronic gastritis, or whether the accompanying malnutrition and the associated liver disease was the cause, cannot be definitely stated.

ABSTRACTER—C. Wilmer Wirts, M.D.

AUTHOR: Nelson, R. S.

TITLE: Routine Gastroscopic Photography.

REFERENCE: Gastroenterology 30:661, April 1956.

ABSTRACT: During the development of gastroscopy from the first rigid instrument to the present flexible one, attempts have been made to photograph the interior of the stomach. Such attempts have met with variable success. Watson and Segal reported fair to good color reproductions of the endoscopic findings in 61.5 per cent of the patients examined. The principles of this apparatus appeared excellent but it contained obvious difficulties for routine use by the average gastroscopist. Consequently Nelson initiated efforts in 1950 to ada some of the excellent features of this method to a simpl apparatus, and considers the results, especially with th improved films for both black and white and col photography, to have been excellent and uniform.

He uses the Eder-Chamberlain "400" gastroscop The camera used routinely was the standard Leica bo without lens. The standard Leitz double table relea permitting elevation of the sighting mirror prior t shutter release is fitted to the reflex apparatus an camera. A specially made lamp is used, which is set t function at 25 volts and which may be raised to 5 or 60 volts during exposure of the film. A simple rhe stat is employed for turning up the current prior to e posure and turning it down following completion.

While certainly inferior to color, black and whi film is useful for recording morphology of the stomac and movements of the antrum, and in training any op erator in gastroscopic photography. With the ne Eastman Tri-X, superior pictures with good detail i 35mm. may be obtained at exposures of 1/25 to 1/5 of a second, depending on developing procedures. U of this film at 1/25 of a second is recommended whi gaining familiarity with the apparatus and method.

Nothing can take the place of color in recording th exact appearance of intragastric lesions. The ne Ektachrome gives excellent pictures down to 2/5 to 1/ second exposure with suitable developing procedure The color reproduction is slightly different from Kod chrome, and one must decide which he considers th more natural.

Although the gastroscopic photographer is visualizin the stomach and taking pictures through air as a medium other environmental features serve to plague him. The may be summarized as movements of the stomach, of mucus, blood or regurgitated material, poor coopera tion on the part of the patient, and incorrect focus an shape of field. The author feels that experience with th method should permit one to overcome these difficulties

ABSTRACTER—C. Wilmer Wirts, M.D.

Multiple Positions Technique in 2500 Gastroscopic Examinations

LEONIDAS H. BERRY, M.D.

Presented at the Clinical Session, Annual Meeting o the American Gastroscopic Society, June 11, 195 Chicago, Ill.

Standard procedure in looking into the stoma through a gastroscope requires the patient to lie o the examining table upon his left side. Several ye ago a patient, who was a known case of "situs inver viscerum," was referred to the author. It was therefo decided to reverse the gastroscopic technique, and pla the patient on the table on his right side. The examin tion was carried out satisfactorily. The question th arose as to what the gastroscopist would have seen h he not known about the transposition of the orga Accordingly, on another occasion, the patient was e amined in the standard position. It was found that th areas which usually remain "blind spots" for the gast scopist were almost entirely visible. We therefo reasoned that a number of patients with normally pla stomachs should be gastroscoped, employing right a left positions to study the comparative advantages. Amo the first 25 patients examined there were 6 who ha lesions seen better from the right side than in th

standard position. In order to avoid left handed introduction of the instrument and re-insertion, the technique of rotating the patient with the instrument in situ was developed. Patients are now examined while lying on either side, on the back, and occasionally the abdomen, in what has come to be known as the "Multiple Positions" technique.

Controlled experiences with the multiple positions technique have shown it to be far superior to examinations in one position only. The technique was illustrated by means of a color film shown at the Scientific Session of the American Gastroscopic Society at Chicago, June 10, 1956. Gastroscopic views of the stomach's interior in color were shown, demonstrating the improved visualization of cancerous, ulcerative, or gastritic lesions in the respective positions.

Gastroscopy in Old Heidelberg

LT. COL. EDDY D. PALMER

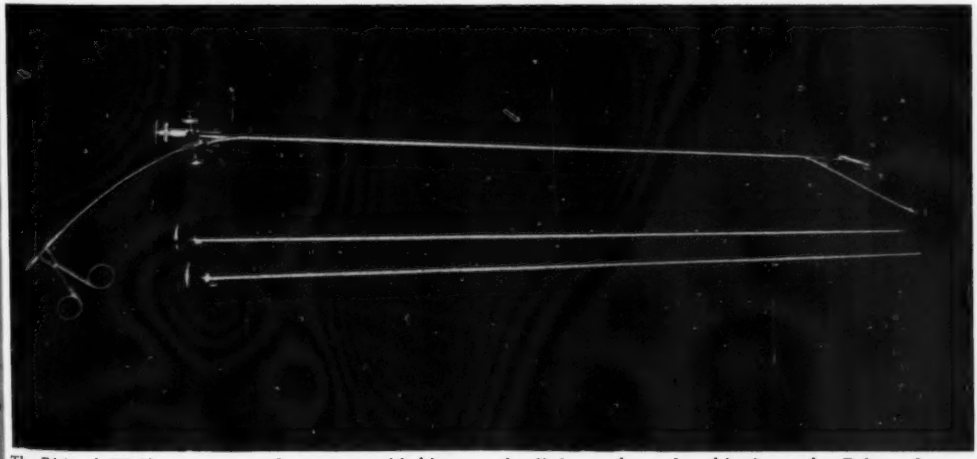
Heidelberg, I am told, hasn't changed very much in the past 200 years—the Old Bridge over the Neckar hasn't been paved, the students still gather for their beer at the Roten Ochsen, as did the Student Prince (although no one resembling Kathie can now be found), the castle still attracts its troops of townfolk hikers on a Sunday afternoon, and the Philosopher's Way continues to arrive nowhere as it twists and turns along the landscaped hillside on the other side of the river. This, Germany's oldest University town, has not been physically touched by war since the armies of Louis XIV worked the area over, and it still looks as though someone designed it as a backdrop for an operetta. But, when it comes to medical things, Heidelberg offers a startling anachronism, for there are a thousand new and tremendously interesting things going on at the University medical school. Many of these revolve about artificial derangement of intracellular enzyme systems, particularly as it may be applicable to cancer therapy.

There is no tendency to divide thinking on internal medicine into a gastroenterologic subspecialty. Prof. Dr. K. Matthes is director of all of the University's medical services, which are housed in the Ludolf Krehl hospital. Kussmaul once worked here, although I believe he was in Vienna when he made those earliest attempts at gastroscopy, published in 1868. One of the present medical assistants is Dr. Benno Hess, who has only recently returned from postgraduate work at the University of Pennsylvania. Prof. Matthes and his staff believe gastroscopy is an important help in their clinical practice and use it frequently. Medical esophagoscopy, on the other hand, has found no place in their medicine. Especially, they believe that patients who might have varices should never undergo esophagoscopy—although, since they never have tried it, they admit this may possibly be a prejudiced opinion.

Dr. Sielaf carries out the gastroscopies for the Ludolf Krehl hospital, and this is very interesting because Dr. Sielaf is the hospital's chief radiologist. Your correspondent had never encountered this total roentgen-endoscopic wedding before, and, even though relative diagnostic effectiveness from clinic to clinic is quite impossible to judge, it was clear that here is a set-up which promises maximum effectiveness for gastric diagnosis. In addition Dr. Sielaf has done extensive work in correlating balloon studies with roentgen findings in the measurement of upper gastrointestinal pressure and motility functions. About five gastroscopies are done a week, right in the X-ray department. The Wolf-Schindler instrument is used for the most part.

Dr. H. Stollreiter, a more familiar figure to American gastroscopists, practices surgery and carries out the gastroscopies at the University's surgical clinic. There will be a report on his activities after a while.

An interesting new gastroscope which has been used in Heidelberg and which has been made available for use in our Army (but which would never be used by us) is one labeled simply as the Richard Wolf gastroscope. This is a flat, broad, blade-like instrument, totally rigid, with a little crook at the objective end reminiscent of the old Mikulicz design. There are two very slim rigid telescopes which can be passed through it, one giving a right-angle view and the other a retrograde view. It is equipped with a biopsy apparatus which is an exact duplicate of that of Dr. Benedict's gastroscope —long flexible forceps plus a platform at the objective end controllable by a double wheel at the ocular end. The rigid design is surely atavistic, to say the least, and it is surprising to find that such an instrument should be introduced in this era.



The Richard Wolf gastorscope. Instrument with biopsy forceps in place, above, showing totally rigid design and the little crook at the objective end. Below, the two telescopes.

Protocol

SAMPLE PROTOCOL: As an aid in writing Protocols for presentation to the Board of Admissions, the following sample was agreed upon by the Editorial Board as being typical of an excellent Gastroscopic report. (Ed.)

NAME OF PATIENT: Jones, J.

GASTROSCOPIC NO.: 1234

GASTROSCOPIST: Joseph Smith, M.D.

AGE: 52 SEX: Male DATE: 11-1-56

OBSERVATION NO.: 1

INSTITUTION OR CITY: County Hospital, Pinta City, Nebraska

INDICATIONS: Ulcerating lesion of stomach shown roentgenographically.

BRIEF HISTORY: Since about July 1, 1956 (approximately 4 months prior to gastroscopic examination) patient has been having rhythmically recurring mild epigastric gnawing pain appearing about one hour after meals and commonly awakening him from sleep about 2:00 A.M. There has been weight loss over this time of approximately 6 pounds. No other systemic symptoms.

PERTINENT LABORATORY FINDINGS: Hemoglobin 14 grams %. White blood cell count 7,500 with normal differential. Urinalysis negative. Serological test for syphilis negative. Serum alkaline phosphatase 3.4 units (Bodansky). Serum bilirubin 0.2 mg. % direct; 0.9 mg. % total. Fasting blood sugar 90 mg. %. Blood urea nitrogen 12 mg. %.

X-RAY REPORT: Lesser curvature gastric ulcer situated about 2 cm. proximal to the re-entrant angle. No rigidity of the wall above or below the ulceration. Mucosal folds were seen to converge toward but did not enter completely into the base of the ulcer.

GASTROSCOPIC FINDINGS: DATE:
(State type and amount of premedication, topical anesthesia and character of gastric aspiration when used.)

The patient was prepared by preliminary administration of codeine sulfate, 1 grain, and atropine sulfate 1-150 grain, subcutaneously. The oropharynx was painted with 2% pontocain through a multi-perforated tube (vol. of pontocain). The large stomach tube was passed without difficulty and 25 cc. of clear fluid were obtained from the fasting stomach. There were 20 units of free acid in this material.

The gastroscope was passed with ease. The stomach came into view immediately. The angulus was clearly seen and presented a sharp margin. Peristalsis was observed to pass along the antrum and the pyloric canal was seen. At the junction of the middle and lower thirds of the body of the stomach was a sharply demarcated ulcer measuring approximately 1.5 cm. in its greatest diameter. The margin of the ulcer was sharp and distinct throughout with a fine reddish halo around the edge. The base of the ulcer was covered with a brilliant white smooth exudate. There were no surrounding nodules or areas of hemorrhage. The gastric wall seemed distensible. The mucosa of the remaining visible portions of the stomach showed no abnormalities.

GASTROSCOPIC IMPRESSION: Ulcer, benign, situated on lesser curvature at about the junction of the middle and lower thirds of the body of the stomach.

SURGICAL FINDINGS: Operation was performed o 11-7-56. A benign-appearing ulcer was found alo the lesser curvature of the lower portion of the bo of the stomach. There were no enlarged lymp nodes and the lesion did not appear to infiltrate th adjacent stomach. Subtotal gastric resection of th Billroth I type was done.

MICROSCOPIC AND GROSS PATHOLOGY: Benig gastric ulcer.

AUTOPSY FINDINGS: ———

CLINICAL FOLLOW-UP: Postoperative course was un eventful. Gastrointestinal X-ray examination pe formed one month following operation showed normal appearing gastric remnant, a normally fun tioning gastroenteric stoma, and normal proxim jejunal loops. The patient was last seen approximatel one year following operation. He was complete asymptomatic and physical examination was entire negative. Gastrointestinal X-ray study was again neg tive at this time.

SIGNED: Joseph Smith, M.D.

Experiences With Inhalation Analgesic (Trilene) in Gastroscopy

MILTON J. MATZNER, M.D., and
STANLEY STARK, M.D.

Presented at the Annual Meeting of the Americ Gastroscopic Society, June 10, 1956, Chicago, Ill.

Mr. Chairman, members and guests, Dr. Matzner an I wish to thank you for inviting us here to present thi paper.

Gastroscopy, since the advent of the flexible gastr scope, has become established as an excellent sa diagnostic procedure. Recently, with the advent of th flexible obturator esophagoscope, this too has been adde to the armamentarium of the gastro-enterological endo copist.

The major drawbacks have been unsafe, inadequat or overly complicated anesthesia or analgesia, necessar in performing these examinations. Relaxation and co operation of the patient are essential requirement Good psychological preparation of the patient is a important preliminary measure to endoscopy. However gastroscopy has not infrequently been a very disagreeabl experience for the patient, and adequate cooperation an relaxation for a thorough examination has not alwa been obtained by conventional methods of anesthesia.

The following methods of anesthesia and analgesi are now generally in use:—

1. Local anesthesia with Pontocaine, Pyribenzamine cocaine or Benadryl combined with sedation, na cotics or both.
2. Intravenous meperidine hydrochloride (Demerol without local anesthesia.
3. Combinations of narcotics such as Nalline, Nisent and scopolamine.
4. General anesthesia (usually intravenous barbitu rates) combined with local anesthesia and muscl relaxants such as Succinylcholine, and endotrache intubation.
5. No anesthesia.

Local anesthetics present the danger of untowa reactions which have resulted even in death. In 195

Drs. Cimoch and Wirts described the use of intravenous meperidine hydrochloride (Demerol) without the use of local anesthesia. This is an excellent procedure but has the drawback of frequent supression of respiration and long recovery period requiring at least nursing supervision. Similarly, combinations with Nalline, although obviating the respiratory depression, have long recovery periods too. General anesthetics require more trained personnel and are limited to operating room use. We have gastroscoped some patients, especially elderly debilitated ones, without any need of anesthesia. However, the resultant psychic trauma and discomfort accentuated the need of some anesthetic agent. I am sure that none of us consider endoscopy without analgesia as an adequate routine procedure. This is readily envisioned when we recall that even the passage of a Levine tube is disagreeable to many patients.

In view of these consideratıcns, when the effects of trichlorethylene became apparent in the fields of obstetrics, minor surgery, gynecology and urology, one of us (M.M.) suggested its use for gastroscopy. To this, we soon added esophagoscopy.

The advantages of Trilene appear to transcend most of the objections that we have had to previous methods.

No complicated apparatus or help is needed. The Duke University inhaler is relatively inexpensive and can be used anywhere and at anytime, whether it be operating room, clinic, or office, without the necessity of prior heavy sedation. Elimination of local anesthetics is a time saver and avoids their inherent dangers. The patients remain awake and cooperative. They control the anesthesia so that overdosage does not occur. In the rare instance when consciousness is lost, it is only a matter of seconds before it is regained. There are no limitations on working time. The Trilene may be given before Ewald or Levine tube intubation and more given as needed when endoscopic intubation is commenced. We have found the cricopharyngeus more relaxed than by any previous method used and no cardiospasm preventing successful intubation has occurred so far. The patient's respirations are not depressed and he receives adequate oxygen through the inhaler. There is no excitement, nausea or vomiting. Trilene does not cause excessive salivation or secretion of mucus so that only small amounts of atropine by preliminary injection are required. Experimental studies reveal no evidence of renal or liver damage after prolonged administration. This is important where patients having liver cirrhosis and possible esophageal varices are to be esophagoscoped. Within ten to fifteen minutes after termination, the patient may eat, drink and go home because there are no after effects, either general or local.

The contraindications and disadvantages of Trilene are:

1. It is not recommended in patients with severe cardiac failure or active cardiac disease and should never be used at the same time with epinephrine, although other vasoconstrictors may be used.
2. The odor may be slightly objectionable to some patients but we have found that by starting with a minimal concentration and gradually increasing the concentration, the patient readily gets accustomed to the odor.

METHOD

After preliminary injection of atropine, and with the patient lying in the left lateral decubitus position to avoid the necessity of subsequent positioning, the inhaler filled with 15 cc. of Trilene is strapped to the right wrist. The valve is adjusted to minimum concentration and the patient starts inhaling. The valve is gradually adjusted to allow increased concentration. The patient is watched for signs of tachypnea, change in color, tachycardia, or arrythmia. When the patient drops the mask or his jaw becomes very relaxed, the patient is ready for intubation. (Average time is about five minutes.) After preliminary gastric aspiration when indicated, the patient is allowed to breathe additional Trilene before endoscopy. The patient, holding the mask in his right hand, may place it over his face at anytime during endoscopy and take more analgesia if he so desires. We have found this necessary only when the procedure is unusually long, as for demonstration purposes.

Following the withdrawal of the endoscope, the patient is allowed to rest for a variable period up to thirty minutes, although frequently only five minutes is necessary. He is then allowed complete activity to the extent of taking public transportation alone in returning home. He is allowed to eat and drink as soon as he desires.

RESULTS

To date we have examined 86 cases of which 72 were gastroscopies, 10 esophagoscopies and 4 combined esophago-gastroscopics.

There has been only one failure of intubation, and one failure of maintaining intubation long enough for satisfactory examination.

Schindler states that he has found it impossible to intubate approximately 2% of patients by any method, so that in our hands the procedure presents a favorable result. The 2 cases in which failure occurred were of the following type:—

a) The patient could be intubated but because of uncooperativeness, it was necessary to remove the gastroscope.

b) The patient could not be intubated because of local causes such as severe cervical arthritis.

SUMMARY AND CONCLUSIONS

In an attempt to reduce the patient's discomfort by more effective analgesia during gastroenterological endoscopy, we have employed inhalation analgesia with trichlorethylene (Trilene). The degree of relaxation and decrease in the patient's discomfort has been so marked in most instances that we feel this should result in wider use of this valuable diagnostic procedure in indicated cases. We do not claim that all the inherent discomfort of endoscopy is removed, since this would require much deeper anesthesia.

Trilene inhalation has now become our routine method of analgesia for gastroscopy and esophagoscopy (in the absence of contraindications) in both ambulatory, private and clinic patients, as well as hospitalized patients.

Gastrophotography

BY: RUDOLF SCHINDLER, M.D.

Numerous attempts have been made at photographing the interior of the stomach in the last twenty years, since I reviewed the subject of gastrophotography ("Brief Review of the Past and Future of Gastrophotography," Am. J. Digest. Dis., 4:259, 1937). Lately, however, marked success has been obtained.

Nelson states quite correctly that the best word description in any report falls far short of exactness. In fact, written reports are never very impressive. Only

the observer who looks through the gastroscope himself is impressed by the multicolored picture he can see. The reader of protocols can never quite suppress his doubts about the accuracy of the observations described. This probably explains why surgeons have been so reluctant to accept the frequency and importance of the severe gastritis of the postoperative stomach which has been described in so many publications and protocols. There is no doubt that if what the gastroscopist sees could be demonstrated objectively by photographs, the impact on surgical thinking would be a tremendous one. Many questions concerning the development of chronic gastritis could be settled much better if objective records were available. It was recognized early that, especially for the latter purpose, only colored pictures would suffice and for a long time this seemed not to be easy to accomplish.

The Segal-Watson photographic apparatus has proved to be too complicated and difficult to handle. Lately, however, three attempts at photographing the interior of the stomach have yielded excellent results. Heinz Pickert published a paper in the Deutsches Medizinisches Journal, 7:493, 1956, entitled "Neue Versuche einer gastroskopischen Farbphotographie." The published colored pictures are marvelous. They reproduce exactly the gastroscopic appearance of the gastric mucosa. However, the photographs were secured through a rigid type of gastroscope, an instrument similar to the old Loening-Stieda gastroscope and to the Hardt gastroscope. Satisfactory colored pictures through a rigid gastroscope were earlier taken by Henning. I would suspect, however, that, on the whole, the use of rigid gastroscopes will not be accepted by the great majority of gastroscopists. Therefore, this attempt is probably not the final solution of gastrophotography.

Robert S. Nelson published a splendid paper on "Routine Gastroscopic Photography" in Gastroenterology, 30:661, 1956. He attached a standard Leica camera to an Eder-Chamberlain gastroscope in a very ingenious way. For obvious reasons he could publish only black and white pictures. Unfortunately, printing of colored pictures is so expensive in this country, in contrast to European countries, that it is practically out of the question to publish color plates. However, Dr. Nelson was kind enough to send me colored films with exposures made with his apparatus. They were excellent and I feel that here something has been accomplished which probably will permit taking routine photographs of the interior of the stomach during gastroscopy. It should not be too difficult to adapt this or a similar arrangement, to any kind and type of gastroscope. Many gastroscopists prefer not to use the Taylor-Eder type of gastroscope because of its short flexible portion and because the English literature contains reports of hypopharyngeal lesions occurring with this type of gastroscope, lesions which are highly infrequent in this country.

A third attempt at gastrophotography, but along a quite different line, has been made by Sadataka Tasaka of the University of Tokyo. He returned to the system of blind gastrophotography. In contrast to the gastrophotor, which had pinholes as the optical system, Tasaka used a true optical lens system. He visited us in Los Angeles and demonstrated his pictures. They were wonderful, far better than the lunar landscapes obtained with the gastrophotor apparatus. Whether this blind method of taking pictures will yield sufficiently clear reproductions of what is seen gastroscopically remains to be proved. However, the photographs obtained by Professor Tasaka are so clear that it is certainly worthwhile to continue with the study of this apparatus. We are presently doing just this in Los Angeles.

With whatever method the interior of the stomach is reproduced objectively, such pictures as may be obtained will certainly be more convincing than simple word descriptions.

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Annual Meeting

The annual meeting of The American Gastroscopic Society will be held at The Broadmoor, Colorado Springs, Thursday morning, 16 May, 1957 with the following program:

8:30	Basil I. Hirschowitz	Demonstration of a new gastroscope—"The Fiberscope"
8:50	Discussion	
9:00	Angelo E. Dagradi Rudolf Schindler Raymond N. Killeen	Endoscopic evaluation of hiatal hernia
9:20	Discussion	
9:30	Charles A. Flood and George C. Hennig	Management of hiatal hernia
9:50	Discussion	
10:00	Robert S. Nelson	Gastroscopic photography
10:20	Discussion	
10:30 10:30	Guest speaker— Mr. Hermon Taylor, Professor of Surgery, London, England	Difficulties and Dangers of Gastroscopy
10:50	Discussion	
11:00	Joseph Kirsner, Moderator Samuel D. Kushlan Frank B. McGlone Frederick E. Templeton Moses Paulson Edward B. Benedict	Panel Discussion—The evaluation of clinical methods for examining the esophagus

On the afternoon of 16 May the meeting of the Gastrointestinal Research Group will be held in The Broadmoor and it is hoped the respective members of The American Gastroscopic Society and the Researchers will attend both meetings.

A combined banquet will be held by The American Gastroscopic Society and the Research Group in The Broadmoor at 7:00 P.M. Tickets will cost $8.50 for cocktails and dinner and, it is hoped that most will be distributed by advance sale. Those belonging to both organizations of course may purchase through either group.

Mr. Hermon Taylor of London will be the recipient of the Schindler Award.

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